IN THE MATTER OF :

1998 Biennial Regulatory Review - Amendment of Part 97 of the Commission's Amateur Service Rules.	))**WT Docket 98-143**))

COMMENTS OF: **DATE:** August 25, 1998

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I herewith file these comments on August 25, 1998, regarding the FCC's proposed *Amendment of Part 97 of the Commission's Amateur Service Rules,* **WT Docket 98-143.** I appreciate the opportunity to offer my comments in this matter, and *have elected to file them in nearly 100 percent agreement with those filed by Mr. Alan J. Wormser, N5LF. Changes in wording herein do not reflect any disagreement with Mr. Wormser's concerns and/or proposals.*

I view this as a timely opportunity to begin a new era in Amateur Radio, and to effectively eliminate certain problems which have plagued both the FCC and radio amateurs themselves, including an ever-increasing rift between non-I-IF no-code licensees and those who have upgraded to attain HF operating privileges, and a degradation of the integrity of the Amateur Radio licensing process. The following five points are my primary concerns, and I have used this NPRM response to suggest solutions which I believe both radio amateurs and the Commissioners will find worthy of consideration and adoption. The concerns are:

1. to increase technical proficiency and operating skills, and encourage upgrading;

2. to encourage use of digital modes over less-challenging modes such as SSB and FM;

3. to reserve HF voice modes and power output privileges as incentives to upgrade.

4. to reform the testing procedures; and

5. to reverse the 11 -year trend to "dumb down" the license exams.

In these comments, "code" and "CW' refer to the Continental (International Morse) Code.

My detailed comments are as follows:

A. License Classes (Docket para. 12)

I agree that there should be 4 license classes. However, I believe a more workable scheme would combine the Novice, Technician Plus and pre-1987 Technicians into a new Intermediate Class, and grandfather the Generals to Advanced Class.

Any licensees grandfathered to a higher class should be required to take the additional exam elements before renewal.

Below, I outline a scheme that retains the current tests, but enhances privileges in a manner that encourages upgrading and the use of digital modes. Specifically, I propose 4 classes as follows (parentheses indicate equivalent current license, **boldface** indicates changes from current requirements and privileges):

1. Technician Class (Current No-Code Technicians)

   a. Technician written exam.
   b. Privileges: Same as current No-Code Technician VHF privileges
   c. Power limit: 50 watts output

2. Intermediate Class (Pre-1987 Technician, Technician Plus, Novice) **-- adds 80 meter voice** to provide opportunity for traffic handling on existing voice nets

   a. **Written General Class exam** and 5 wpm Morse Code exam
   b. HF digital and CW privileges: **Same as Advanced Class**
   c. HF SSB privileges: 28,300-28,500 kHz, **and 3850-4000 kHz** (traffic handling)
   d. Power limit: 200 **watts output**
   e. Pre-1987 Technicians grandfathered automatically, but **Technician Plus and Novices must take the missing written element(s) before renewal.**

3. Advanced Class (Advanced Class and grandfathered Generals)

   a. Written Advanced Class exam and 12 wpm Morse Code exam
   b. Privileges (mode, bands, and power): Same as current Advanced Class
   c. Generals must take the missing written element before renewal

4. Extra Class (Extra Class)

   a. Written Extra Class exam and 20 wpm Morse Code exam
   b. Privileges (modes, bands, power): Same as current Extra Class

5. Grandfathering (would only apply to current Novice, Technican Plus, and General Classes)

a. During a **2-year grace period after** the new regulations take effect renewals will not require additional testing.

b. **After the 2-year grace period, those who do not pass the additional exams will be reclassified upon renewal** as follows: grandfathered Novices and Technician Pluses to Technician Class, and grandfathered Generals to Intermediate Class.

6. Discussion: The outline I propose is similar to the ARRL's July 1998 proposal, but has several elements that should enhance technical skills. As with both the ARRL proposal and the NPRM, higher power levels and voice operating modes are used as motivation for licensees to enhance their skills.

a. For Intermediate Class (pre-1987 Technician, and grandfathered Novices and Tech Plus), **adding the upper 150 kHz of 80 meters** to their voice privileges allows them to get *on-the-air training in emergency service nets and long-range traffic handling.* In addition, it allows them to *explore propagation and antenna designs that they might not encounter on 10 meters.*

b. By **giving Intermediate Class all of the CW and digital privileges of the Advanced Class (but at 200 watts),** they can enhance their skills in the modes that represent, respectively, the most basic and the *most modern, computer-oriented modes.* This will also encourage *building equipment and experimentation.*

c. For Technician and Technician Plus licensees, voice privileges have proven to be a severe distraction to upgrading and acquiring additional skills. As noted in WT Docket 98-l 43, paragraph 13, Technician and Technician Plus overutilize FM voice modes to the exclusion of other modes and technologies. Packet activity among Technicians and Tech Pluses has been in decline for the past five years.

d. Technician and Intermediate licenses should be provided for learning, upgrading skills, and experimentation. They should be *stepping-stones,* not terminal licenses: Our goal should be to have a core of operators who have mastered the skills required of at least the Advanced Class license.

e. My proposed **2-year grace period for renewal without additional testing** will give each affected licensee a 2 to 12 year period of enhanced operating privileges. In a decade's time most of these individuals would have upgraded anyway, so the effect on them is nominal and we will have increased skill levels across the board. It will also weed out those not really interested in continuing in the hobby.

B. Comment on the notion that digital modes are "replacing" CW (Docket para. 12)

1. While it is true overall that digital modes are on the rise and CW is in decline, the Docket incorrectly states that digital modes are "replacing" C W on military and commercial frequencies. *CW is a backup for voice, not digital, modes. Digital modes serve new roles in modern communications involving unattended bulletin boards, automated forwarding, bulk messages, and data transmission -- tasks for which CW and voice were never used.*

2. In contrast, CW and voice modes are more efficient for low-volume traffic, "live" message turnaround times, and critical emergency operations. As an adjunct to HF voice, CW is irreplaceable during aurora1 disturbances, solar blackouts, under low power (or to conserve batteries), or where

interference and noise are a problem. CW transmissions are also more secure than voice since few non-amateurs can decode them. As an experienced traffic handler, I often have used a combination of SSB and CW to get a message through.

3. The *commercial and military sectors* must conserve limited resources by focusing training and equipment dollars on only a few transmission modes. For them, any backup for voice communications (such as CW) must take a lower priority than the advanced digital modes and global positioning systems that compete for the same dollars.

4. In contrast, the *Amateur Service* is not limited by the same resource constraints. Using volunteer labor, personal equipment, and peer-training, *the Amateur Service thrives on the very redundancy that would 'break the budget" of a military or commercial entity. Therefore, in the Amateur Service, CW continues to be used day-to-day as a practical and inexpensive supplement to HF voice communications.*

C. Deleting the Novice Bands (Docket para. 12)

I concur with the deletion, but with the stipulation that **the Novice bands should be released for digital and CW modes, not voice/image modes.**

D. How the Novice bands should be distributed (Docket para. 12)

The **current Novice portions of 80, 40, 15, and Novice CW subband on 10 meters should be released to digital and CW modes.** The 10 meter Novice phone subband should remain as it is for **voice/image/C** W modes.

E. Should Novices be allowed to use all CW bands on 80, 40, 15, and 10 at 200 watts?

Yes, and, as Intermediate Class licensees, so should Tech Plus and pre-1987 Technicians

F. Upgrading of Tech Plus and Technician (Docket para. 13)

If grandfathered, they should take the additional exam elements before renewal.

G. Allow General and Advanced VE's to test applicants of lower license class (Docket para. 14)

I concur, but would suggest that **since Extras can now administer Extra exams, it follows that with the revised system, it is equally logical to allow Generals to administer General Class exams, and Advanced to administer Advanced Class exams.**

H. Eliminating RACES (Docket para. 16)

1. I concur that RACES should be eliminated. RACES rules should be replaced with guidelines or regulations codifying procedures for Amateur Service emergency organizations to achieve official FCC sanction for their emergency activities. For example, through developing Memoranda of Agreement

among the Amateur Service emergenoy organization (generally ARES -- the ARRL Amateur Radio Emergency Service) and its served agencies. ARES already has such agreements.

2. If RACES is **not** eliminated, please **delete the restrictions on the number of hours per year that are allowed for emergency drills by RACES stations.**

J. Should the FCC Privatize Enforcement? (Docket para. 17)

Recent cutbacks have forced the closing of many field monitoring stations, to the best of my knowledge, and the Amateur Service is willing to assist the FCC to fill this void. But *Amateur Radio operators can only gather evidence and assist as expert witnesses.* To get the FCC to enforce its own regulations, *Amateurs should not be required to accept the liability andpersonal risks that are within the province of FCC investigators and Federal marshals. I sympathize with the FCC's manpower problems, but legal matters must remain the duty of the federal enforcement agency -- not Amateurs.*

K. How many levels of CW exam? (Docket para. 24)

1. I favor three levels: 5, 12 and 20 wpm. **I** suggest the **change from 13 to 12 wpm to accommodate agreements with the Europeans under CEPT.**

2. In no case should there be less than a 12 wpm requirement for the current General Class HF privileges. While the 5 wpm exam allows a beginner to get on the air to improve their skills, only at about 12-13 wpm does the operator become competent enough at CW to handle an emergency or to accurately relay messages.

L. Type of CW exam (Docket para. 24)

1. I favor a test of **1 minute solid copy out of 5 minutes.** In emergency situations or when passing traffic an operator must copy a sequence of letters and figures correctly to relay that information to the proper authorities, An exam of 1 minute solid copy is a better test of this skill.

2. Only use multiple choice or fill-in blanks on accommodated exams for persons with disabilities. It is too easy for a bright person to guess at 7 of 10 multiple choice questions.

M. CW Exam Waivers (Docket para. 25)

1. Eliminate the current waiver system. The array of accommodations from which VE's may already choose are more than adequate to address the needs of disabled examinees. There are many skilled operators in the Amateur Service who are blind, deaf, severely arthritic, quadriplegic, or suffer other severe multiple handicaps who nevertheless were able to demonstrate their abilities to a VE.

2. In the rare situation where no fair accommodation seems appropriate, the FCC field office should make the determination following explicit guidelines and after discussion with the attending physician. The FCC would then issue a waiver certificate, and a candidate who presented

an FCC waiver certificate to the VE would not need to explain further -- thus preserving their right to privacy.

3. I agree with the ARRL that the candidates for a CW exam waiver should attempt an **accommodated test** before being allowed a waiver, but where is their motivation to pass? I recommend a rule **that the candidate who fails the accommodated test, and wants a waiver, must then appeal to the FCC for a ruling and waiver certificate.**

4. A physician can only provide expert information to the FCC regarding the patient's medical condition. As a volunteer, **a VE does not have the authority (or skill) to judge the merits of a physician's medical waiver.** Therefore, as the regulator. the FCC represents the best combination of technical expertise, confidentiality, and legal authority to decide waiver requests.

N. Provide VE's w/ flexible question content? (Docket para. 26)

1. Clearly this should be done. The **exact wording of the question pools should not be public information.** The **exact texts of the correct answer and distracters should not be public information.** Memorization is too easy.

2. The VE's should be allowed to choose from among many distracters for each question in the pool, and to arrange them in any order. The VE Coordinators can provide sufficient check-and-balance to ensure fair (unambiguous) versions of each question on the exam.

0. Re-taking a failed element at the same VE session.

1. There is a common practice for examinees who fail a written or Morse code element to re-take another version of the same exam by simply paying a second fee.

2. I recommend a rule that **examinees can only fail one written and one Morse code element per VE session.**

P. Are the Categories of the Questions Adequate? (Docket para. 27)

Overall, the current question categories are adequate. I would suggest **adding more questions** on identifying **circuit schematics** (especially oscillators, buffers, amplifiers, and active and passive filters) and **circuit elements** (e.g., voltage dividers, diode crowbar circuits, and the input/output impedance and effect of loads between stages of a circuit), on using specific types of **test equipment,** and on **digital data compression and TCP/IP.** I would also suggest some of these topics be introduced earlier in the testing series -- i.e. in the Technician and General exams.

I hope these comments prove helpful in your deliberations.

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